



Name _____

Practice: For use after Lesson 6.4, Algebra 2 with Trigonometry

Algebra 2
Unit #5
WS #4

Factoring Polynomials

Factor.

1. $2n^2 - 6n + 10$ _____
2. $4y^2 - 7y$ _____
3. $2r^3 + 2r^2s + 4rs^2$ _____
4. $4x^3y - 20xy^3$ _____
5. $r^2 - 20r + 100$ _____
6. $z^2 + 14z + 49$ _____
7. $25x^2 + 10xy + y^2$ _____
8. $16c^2 - 24cd + 9d^2$ _____
9. $n^2 - 81$ _____
10. $9x^2 - 64$ _____
11. $z^3 - 8$ _____
12. $8a^3 + 27$ _____
13. $r^4 - 9$ _____
14. $d^6 - 49$ _____
15. $63r^3s - 27r^2s^2 + 45rs^3$ _____
16. $n^6 + 27$ _____
17. $9c^4d^2 - 49e^2$ _____

Applications

18. **Manufacturing** The area of a square rug is $4x^2 - 4x + 1$ m².

Express the length of a side of the rug in terms of x .

19. **Storage** The volume of a cube is $x^3 + 27$ cm³. Express the volume in factored form.

MIXED PRACTICE

Multiply.

20. $7(5n - 4)$ _____
21. $(d + 6)(d - 7)$ _____
22. $(2r + 3)^2$ _____
23. $(3a + 7)(3a - 7)$ _____

Factor.

24. $12c - 30$ _____
25. $r^3 - 125$ _____
26. $z^2 + 8z + 16$ _____
27. $25y^2 - 1$ _____